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EXAMINER

PATEL, ASHOKKUMAR B

ART UNIT PAPER NUMBER

2154

DATE MAILED: 09/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/072,428

Applicant(s)

KOLAR ET AL.

Examiner

Ashok B. Patel

Art Unit

2154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

1. Claims 1-37 are subject to examination.

Response to Arguments

2. Applicant's arguments filed 07/08/ 2005 have been fully considered but they are not persuasive for the following reasons:

Claim Rejection Under 35 U.S.C. § 102:

Applicant's argument:

"Thus, with respect to amended claim 1, AAPA fails to teach or suggest a first text block defining a data channel and one or more additional text blocks not contained within the first text block that define one or more data sub-channels within a network link. Moreover, AAPA fails to teach or suggest configuration input therein comprising a first text block defining a data channel and one or more additional text blocks not nested within the first text block that define, as recited by Applicant's claim 13 as amended. Similarly, AAPA fails to teach or suggest configuration input having a first text block defining a data channel and a set of additional non-nested text blocks external to the first text block defining at least one data sub-channel, as required by claims 17 and 27."

Examiner's response:

AAPA clearly teaches "a first text block defining a data channel (page 3, "interface t1-1/1/1/1:0:0) and APPA teaches "one or more additional text blocks not contained within or not nested within the first text block that define one or more data sub-channels within a network link." (page 3, "ds0-1/1/1:0:0:0" and "ds0-1/1/1:0:0:1").

Applicant's argument:

Art Unit: 2154

"With respect to dependent claim 2, AAPA fails to teach or suggest the references are labels that uniquely identify the one or more other text blocks within the configuration input that are external to the first text block."

Examiner's response:

AAPA clearly teaches "labels that uniquely identify the one or more other text blocks within the configuration input that are external to the first text block.." (page 3, "interface t1-1/1/1/1:0:0 and, "ds0-1/1/1:0:0:0" and "ds0-1/1/1:0:0:1").

Claim Rejection Under 35 U.S.C. § 103:**Applicant's argument:**

Claims 3, 25 and 29

"With respect to claims 3, 25 and 39, AAPA in view of Nulu fails to teach or suggest resolving the references to the text blocks within the configuration input, and constructing a hierarchical data structure to store the configuration input based on the resolution of the references. The Examiner correctly recognized that AAPA does not teach or suggest resolving references to the text blocks and constructing hierarchical data based on the resolution. Nevertheless, the Examiner rejected claims 3, 25 and 29 over AAPA in view of Nulu."

Examiner's response:

Nulu teaches in col. 4, line 28-56," More detailed architectural perspectives are still possible. For example, each T1 line (e.g., line 111a) may be further divided into logical ports (hereinafter "ports"). A single T1 frame is divided into twenty-four 64 kbps slots. Random groupings of any of these twenty-four slots may form a port. For example a

Art Unit: 2154

specific customer or user (e.g., customer or user A) of the FT1 service may only require 320 kbps of service. Another customer or user (e.g., customer or user B) of the FT1 service may only require 384 kbps of service. As 320 kbps only consumes 5 slots ($5 \times 64 \text{ kbps} = 320 \text{ kbps}$) and 384 kbps only consumes 6 slots ($6 \times 64 = 384 \text{ kbps}$), customer A may be configured for a port of 5 slots and customer B may be configured for a port of 6 slots on the same T1 line (e.g., line 111a). This leaves 13 of the 24 slots remaining open on T1 line 111a. FIG. 2c is a further detailed architectural perspective 203 of box 101 that shows the configuration of ports 204, 205 for customer/user A and B respectively. Furthermore, in situations where the customer requires his traffic to travel to any destination as opposed to a specific destination, further division of a port with a channel is necessary. The division of a port into a channel is logical. A port looks like a single pipe and multiple channels of traffic may flow in it. A channel is a stream of traffic within a port having a certain address. That is a channel is associated with a stream address as opposed to its time slot. Each channel is uniquely identified by a unique address. A channel is associated with a stream so that they can be handled differently. FIG. 2d shows an architectural perspective 206 that shows two channels 207, 208 for port 205." And also in Fig. 8 and col. 10, line 66 through col. 11, line 12, FIG. 8 shows the GUI 800 when the channel resource 801 is selected. The channel CSM 802 is also shown. In this embodiment, the channel CSM 802 only has "delete channel" menu selection 804. This is consistent with the aforementioned embodiments where specific resources are deleted at their corresponding CSM but added at the next highest CSM. That is, the "add-channel" 703

Art Unit: 2154

menu selection appears in the port CSM 702 (referring briefly back to FIG. 7). The channel parameter field 813 may have three parameters: "circuit ID" 805 (which contains source/destination information such as DLCI for T1); "committed information rate" 806 which limits the traffic rate and "channel type" 807 which identifies the type of traffic and data transformations to be performed if any." Thus, Nulu is resolving references to the text blocks and constructing hierarchical data based on the resolution.

Applicant's argument:

Claims 6 and 32

"Thus, AAPA in view of Nulu fails to teach or suggest justifying configuration data for a first text block for a channel and additional text blocks for sub-channels of that channel at the same, common margin. "

Examiner's response:

Please refer to Fig. 8 in addition to Fig. 3 of Nulu for details.

Claim Rejections - 35 USC §102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action'.

A person shall be entitled to a patent unless -

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 1, 2, 4, 5, 8-10, 12, 13, 15-17, 19, 20, 23, 24, 26-28, 30, 31, 35 and 36 are rejected under 35 U.S.C. 102(a) as being anticipated by Applicant Admitted Prior Art (MPA).

As per claim 1, AAPA discloses a method comprising:

Art Unit: 2154

receiving configuration input having a first text defining a data channel and one or more additional text blocks not contained within the first block that define one or more data sub-channels within a network link (Applicant's specification page 3, lines 1-6), wherein the first text block include references that hierarchically relate the data channel and the data sub-channels (page 3, lines 7-30*, where references are interface lines at head of text boxes. Numbers associated with references indicate hierarchy; and configuring a network device according to the configuration input (page 3, lines 4-5).

As per claim 2, AAPA discloses a method comprising the method of claim 1, wherein the references are labels that uniquely identify the one or more other text blocks within the configuration input that are external to the first text block (page 3, lines 7-30, references delineate the beginning of a text block).

As per claim 4, AAPA discloses a method comprising the method of claim 2, wherein other text blocks include a second text block (page 3, beginning at "interface oc12-1/1/1 (" continuing to matching end bracket) and a second text block (page 3, beginning at "interface ds3-1/1/1:0 (" and continuing to matching end bracket), wherein the first text block includes configuration data for the data channel and a reference to a first data sub-channel, and wherein the second text block includes configuration data for the first data sub-channel (page 3, lines 5-6).

Art Unit: 2154

As per claim 5, AAPA discloses a method comprising the method of claim 1, further comprising displaying a representation of the configuration input to a user (page 4, last two sentences of final paragraph; display presented to administrator who enters the input).

As per claim 8, AAPA discloses a method comprising the method of claim 1, wherein configuring the network device comprises configuring an interface of the network device to channelize input and output data according to the configuration input (specification, page 1, last paragraph; page 2, last two paragraphs; channelization accomplished by using input to configure router).

As per claim 9, AAPA discloses a method comprising the method of claim 1, further comprising routing packets based on the configuration information (page 1, Page 5 second paragraph of "Background").

As per claim 10, AAPA discloses a method comprising the method of claim 1, wherein receiving configuration input comprises receiving configuration input from a user via a local interface (page 3, lines 1-2).

As per claim 12, AAPA discloses a method comprising the method of claim 1, wherein the configuration input includes labels for the text of the data sub-channels, and each label comprises the respective reference concatenated with one or more channel

Art Unit: 2154

identifiers according to the hierarchical relationships of the data channel and the data sub-channels (page 3, lines 7-30*, labels at head of each text block is reference concatenated with numeration scheme that indicates the hierarchy of the channel description).

Claims 13, 15 and 16 recite a computer readable medium storing the configuration text described in claims 1, 4, and 12. AAPA describes the configuration text being entered and displayed inherently requiring storage on a medium. Claims 13 (including "text blocks not nested within the first text block"), 15, and 16 are rejected for the same reasons as claims 1, 4, and 12.

As per claim 17, AAPA discloses a network device comprising: a computer-readable medium to store configuration input having a first text block defining a data channel and a set of additional non-nested text blocks external to the first text block defining at least one data sub-channel (Applicant's specification page 3, lines 1-6), wherein the text blocks include references relating the data channel and the sub-channel (page 3, lines 7-30; where references are interface lines at head of text boxes. Numbers associated with references indicate hierarchy; and a control unit to communicate data over a channelized network link according to the configuration input (Specification page 1, second and third paragraphs of background', page 3, first paragraph).

Art Unit: 2154

As per claim 19, AAPA discloses the network device of claim 17, further comprising a configuration module to receive the configuration input from a user (page 4, last two sentences of final paragraph; display presented to administrator who enters the input).

As per claim 20, AAPA discloses the network device of claim 17, wherein the configuration module receives the configuration via a local interface (Specification page 3, lines 1-2).

As per claim 23, AAPA discloses the network device of claim 17, wherein the configuration input includes a first channel definition block having configuration data for the data channel and a reference to a first sub-channel (page 3, beginning at "interface oc12-1/1/1 (" continuing to matching end bracket), and a second channel definition block having configuration data for the first data sub-channel (page 3, beginning at "interface ds3-1/1/1:0 (' and continuing to matching end bracket).

As per claim 24, AAPA discloses the network device of claim 17, wherein the references hierarchically relate the data channel and the sub-channels (page 3, lines 7 30, where references are interface lines at head of text boxes. Numbers associated with references indicate hierarchy', page 3, lines 5-6).

As per claim 26, AAPA discloses the network device of claim 17, wherein the control unit comprises: a routing engine to store routing information representing a topology of a network', and a packet-forwarding engine to store packet-forwarding information in accordance with the routing information (Specification, page 2, last paragraph, router

Art Unit: 2154

configuration information includes path and mapping options; page 1; router maintains routing information that describes routes through network and forwards packet).

Claims 27, 28, 30, 31 , 35, and 36 are rejected for the same reasons including a set of additional non-nested text blocks external to the first text block as claims 1 , 2, 4, 5, 26, and 10 respectively.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Art Unit: 2154

6. Claims 3, 6, 11, 18, 21, 25, 29, 32, 34, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art (AAPA) in view of Nulu et al. (US 6,650,347, "Nulu").

As per claims 3 and 25, AAPA teaches the method of claim 2 and the network device of claim 17, but does not explicitly teach resolving the references to the text blocks within the configuration input; and constructing a hierarchical data structure to store the configuration input based on the resolution of the references.

Nulu teaches resolving the references to the text blocks within the configuration input; and constructing a hierarchical data structure to store the configuration input based on the resolution of the references (Fig.2 and Fig. 3, visual display depicts the hierarchical).

It would have been obvious to one of ordinary skill in this art at the time the invention was made to combine the teaching of AAPA and Nulu because they both with configuring sub-channels within channels in a data network. Furthermore, the teaching of Nulu to resolve the references within the configuration to construct a hierarchical data structure based on the resolution of the increase the efficiency of managing network configuration by providing a visualize depiction of the hierarchical relationships (See Nulu, col. 6, lines 18-22).

As per claim 6, AAPA teaches the method of claim 5, but does not explicitly

Art Unit: 2154

teach displaying a representation comprises justifying the first text block and the additional text blocks at or near a common margin within a display. Nulu teaches wherein displaying a representation comprises justifying the text at or near a common margin within a display (Fig.3,col. 6, lines 5-10,. col. 6, lines 23-28).

It would have been obvious to one of ordinary skill in this art at the time the invention was made to combine the teaching of AAPA and Nulu because they both with configuring sub-channels within channels in a data network. Furthermore, the teaching of Nulu to justify the configuration input at or near a common margin would increase the efficiency of use of the display by minimizing the amount of horizontal scrolling necessary to visualize the hierarchical relationships (See Nulu, col. 6, lines 18-22).

As per claims 11 and 21, AAPA teaches the method of claim 1 and the network device of claim 17 including receiving configuration input from a user (Specification page 3, lines 1-2), but does not explicitly teach receiving configuration input from a remote user via a network connection.

Nulu teaches receiving configuration input from a user via a network connection (col. 1 line 64-col. 2, line 5).

It would have been obvious to one of ordinary skill in this art at the time the invention was made to combine the teaching of AAPA and Nulu because they both with configuring sub-channels within channels in a data network. Furthermore, the teaching of Nulu to provide configuration input from a remote user via a network connection would increase the efficiency of managing the network by providing a central location for

Art Unit: 2154

configuring and managing (See Nulu, col. 2, lines 3-4).

As per claim 18, AAPA teaches the network device substantially as claimed in claim 17, but does not explicitly teach further comprising an interface card for coupling to the network link, wherein the control unit configures the interface card according to the configuration input.

Nulu teaches configuring configures the interface card according to the configuration input (col. 9. lines 30-55).

It would have been obvious to one of ordinary skill in this art at the time the invention was made to combine the teaching of AAPA and Nulu because they both with configuring sub-channels within channels in a data network. Furthermore, the teaching of Nulu to configure the interface card according to the configuration input allows efficient set configuration of sub channels by allowing an administrator to manipulate the configuration from a visual display confirming the desired setup.

As per claim 29, claim 29 is rejected for the same reasons as claim 3.

As per claim 32, claim 32 is rejected for the same reason as claim 6.

As per claim 34, claim 34 is rejected for the same reason as claim 18.

As per claim 37, claim 37 is rejected for the same reason as claim 11.

7. Claims 7, 14, 22, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art (AAPA) as applied to claims 1, 13, 17, and 27 above and further in view of 'Official Notice'.

As per claims 7, 14, 22, and 33, AAPA does not teach wherein the references

Art Unit: 2154

comprise user-defined names for the data channel and data sub-channels. However the hierarchical notation including user-defined names for channels and sub-channels is functionally equivalent to the notation described in the AAPA (page 3) and is completely analogous to the use of user-defined names for describing programs in terms of user named functions and sub functions to accomplish a maintainable hierarchical, top down design. One of ordinary skill in the art would have been motivated to use user-defined names for the channels and sub-channels to increase the efficiency of design and to facilitate maintaining and changing the configuration input.

Conclusion

Examiner's note: Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

Art Unit: 2154

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ashok B. Patel whose telephone number is (571) 272-3972. The examiner can normally be reached on 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A. Follansbee can be reached on (571) 272-3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Abp

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